

SECTION 6

METAL WINDOWS

6-01 SCOPE: The work covered by this section of the specifications consists in furnishing all plant, labor, equipment, appliances, and materials, except Government-furnished materials, and in performing all operations in connection with the installation of metal windows and metal screens, complete, except glazing, in strict accordance with the applicable drawings and this section of the specifications, and subject to the terms and conditions of the contract.

6-02 GENERAL: Metal windows and transoms shall be double hung, sliding and fixed types, of sizes, shapes and arrangement as indicated on the drawings. Transoms shall be the fixed type. Where frames for windows, doors and transoms adjoin each other, they shall be made as units which can be disassembled for shipping. The Contractor shall verify all masonry openings.

6-03 SHOP DRAWINGS: The Contractor shall prepare shop drawings showing details of construction, sizes, ventilator arrangements, operation, methods of anchoring and all other pertinent information, for metal windows, metal screens and door frames, including hardware to be furnished. Shop drawings shall be submitted to the Contracting Officer for approval. Windows shall be equal to the best products of one of the following manufacturers:

Detroit Steel Products Co., U.S.A.
Truscon Steel Co., U.S.A.
Ceco Steel Products Co., U.S.A.
William Bayley Co., Springfield, Ohio

6-04 WINDOWS: Sections of sash and frames shall be hot-rolled, new billet steel bars, of shapes especially designed for steel sash, of sizes indicated on the drawings and of thicknesses required to withstand wind pressures of 50 pounds per square foot. The sash shall be completely assembled at the plant of the manufacturer. All units shall have welded connections and shall be joined securely to make a perfect mechanical joint. Joints shall be filled, welded and dressed to produce invisible seams. Sash shall be provided with continuous, two-point parallel surface contact between sash and frame sections with overlap at both inside and outside points of closure, insuring a thoroughly weathertight joint. Sash shall be made for glazing with 7/32-inch thick heavy sheet glass using metal glazing clips and glazing compound. Transoms shall be of similar construction. Sliding sash shall have a sufficient number of rollers to effect smooth, quiet, easy operation. The double hung windows shall be of the non-weight block, automatic locking type with brass guide rails and phosphor-bronze weathering strips. Louver sections shall conform to the detail drawings with louver blades spaced 4 inches on centers. Insect screens with rewireable frames shall be attached to the backs of louvers.

6-05 COMBINATION DOOR FRAMES shall be of the sizes and design indicated on the drawings, and shall be constructed of finest grade, cold-rolled, full-pickled, patent-leveled sheet steel. Frames for exterior doors shall be 12-gage material and for interior doors 14-gage material. Head and jamb members shall be accurately fitted to a hair line joint and mitered. Miters

shall be continuously welded at the head and ground smooth. At least three 14-gage, corrugated, adjustable anchors shall be provided for each jamb member and of the type to suit wall conditions. Each shall be provided with a 12-gage floor angle clip welded to the jamb. Angle clip shall have at least two punched holes for securing the frame to the floor construction. Removable 16-gage spreader shall be attached to the bottom of the frame to insure proper alignment and to retain jamb opening in shipment. Frames shall be accurately mortised and reinforced for lock strike plates and hinges specified in section on BUILDERS' HARDWARE, of these specifications. Hinge reinforcements shall be $3/16'' \times 1\frac{1}{2}'' \times 12''$ long and lock strike reinforcements $3/16'' \times 1\frac{1}{2}'' \times 4''$ long. Hardware reinforcements shall be precisely drilled and tapped, and protected with 24-gage galvanized sheet metal boxes, spot welded to the backs of the reinforcing plates to prevent clogging of the tapped holes from foreign materials. Door frames shall also be mortised or drilled for door silencers to be applied in the field. Adequate $3/16$ -inch-thick reinforcement plates shall also be provided for door closer, bracket and other surface-applied hardware for which drilling and tapping is to be done in the field.

6-06 SCREENS: Screens shall be of the fixed type designed for easy attachment or removal, secure in place and free of rattles. Frames and mullions shall be of at least 18 gage steel or heavier, and able to withstand wind pressures of 50 pounds per square foot. Mesh shall be standard 18 by 14, brass or bronze wire mesh, wire size, .015 inch in diameter, and conforming to the requirements of Federal Specification RR-S-141. Mesh shall be held in place on the frame by a removable steel bar. Each screen shall be numbered by securely attaching a $1/2$ -by 1-inch metal tag to the center of the lower rail of each screen and a matching tag on each sill. Paint shall be sanded off the numbers so that they can be easily read.

6-07 SHOP FINISH: All steel members shall be cadmium plated and given at least one coat of anti-corrosive paint before shipment.

6-08 INSTALLATION: Windows and door frames shall be set straight and true, to exact lines and levels. All anchors shall be set prior to placing of concrete or during erection of concrete building blocks. Glazing shall be in accordance with the provisions of section on GLASS AND GLAZING of these specifications and shall be done at the time specified by the Contracting Officer.

6-09 CALKING: All joints between windows, door louvers, screens and surrounding construction shall be calked as specified in section on CALKING, of these specifications.

6-10 HARDWARE:

a. Window Hardware: Window hardware shall be furnished with windows, complete with necessary fittings and fastenings.

b. Door Hardware: Door hardware shall be as specified in section on HARDWARE, BUILDERS' of these specifications. Doors and frames shall be fabricated and fitted to receive the specified hardware. Door hardware shall be either attached by the door manufacturer or fitted to doors and frames at the factory, removed and shipped with the doors.

6-11 ADJUSTMENT: On completion of glazing and all other trades concerned, the Contractor shall inspect all metal windows, doors, screens, and hardware, and make all adjustments necessary for easy and unrestricted operation of all hardware.